**LIGHT AND MOVEMENT**

GLADYS LEE, TANYA CHEE AND YEO YIHUI

**Abstract**

In this project, the relationship between the movement of plants and the different colors of the light they are exposed to was investigated. Similar plants were put into boxes wrapped with differently colored cellophane paper, which were then exposed to light for seven days. The height each plant grew after the seven days was then measured. The experimental results obtained indicated that

**Introduction**

The amount of sunlight a plant receives everyday has been integral to its survival. A plant can grow successfully and flourish if it absorbs enough sunlight to allow photosynthesis to take place. Thus it can be seen that sunlight is indeed important to various plant species if they are to thrive.

While the *amount* of sunlight a plant needs to grow healthily, what about the *color* of the light the plant is exposed to? Does the color of the light affect its growth in any way, whether negative or positive? If mankind discovers what kind of light is the best for plant growth, perhaps in the future we will be able to cultivate rare medicinal plants successfully on an international scale, and therefore help others in need. It is hoped that through this experiment, we will gain more understanding of the integral relationship between plants and light.

The hypothesis is as follows: If the movement (growth) of plants is related to the different colors of light, then bright white fluorescent light will result in a more significant movement of plants than the other colored lights (it will be taller than the other plants exposed to lights of different colors).

**Materials**

Colored cellophane paper (yellow and green) – 2 pieces

Green Bean Seeds – 9 seeds

Tupperware – 3 containers

Cotton Wool – 15 pieces

Cardboard Boxes of Similar Size – 3 pieces

Measuring Tape – 1 roll

**Methods**

The variables for our investigation are as follows:

* Independent Variable (IV) : Color of the Light
* Dependent Variable (DV) : Height the Plant Gains in Growth During Experiment
* Control Variable (CV) : (1) Type of Lamps (Florescent)

(2) Type of Seeds

**A. To make cardboard boxes wrapped with colored cellophane paper**